

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/006936 A1

(51) International Patent Classification⁷: **A61K 31/565, A61P 35/00**

(74) Agent: VAN WESTENBRUGGE, Andries; Nederland-
sch Octrooibureau, Scheveningseweg 82, P.O. Box 29720,
NL-2502 LS The Hague (NL).

(21) International Application Number:

PCT/NL2003/000513

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 11 July 2003 (11.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02077812.2 12 July 2002 (12.07.2002) EP
03075435.2 14 February 2003 (14.02.2003) EP

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): PAN-
TARHEI BIOSCIENCES B.V. [NL/NL]; P.O. Box 464,
NL-3700 AL Zeist (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COELINGH BEN-
NINK, Herman, Jan, Tijmen [NL/NL]; Melvill van
Carnbeelaan 38, NL-3971 BE Driebergen (NL). BUN-
SCHOTEN, Evert, Johannes [NL/NL]; Plantsoen 16,
NL-5384 EV Heesch (NL).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

A1

WO 2004/006936

(54) Title: PHARMACEUTICAL COMPOSITION COMPRISING ESTETROL DERIVATIVES FOR USE IN CANCER THER-
APY

(57) Abstract: The present invention relates to a method of treating or preventing estrogen-sensitive tumours in a mammal, said method comprising the administration of a therapeutically effective amount of an estrogenic component to said mammal, wherein the estrogenic component is selected from the group consisting of: substances represented by the following formula (I) in which formula R₁, R₂, R₃, R₄, independently are a hydrogen atom, a hydroxyl group or an alkoxy group with 1-5 carbon atoms; precursors capable of liberating a substance according to the aforementioned formula when used in the present method; and mixtures of one or more of the aforementioned substances and/or precursors. The estrogenic component according to the invention does not have undesirable proliferative effects on breast and/or endometrial tissue and displays sufficient estrogenicity to prevent that its administration will lead to hypoestrogenism and/or climacteric complaints. Other aspects of the invention relate to pharmaceutical compositions, drug delivery systems and kits comprising the aforementioned estrogenic component in combination with an estrogen suppressant.